

REMARKS

Entry of this Amendment in accordance with the provisions of 37 CFR §1.114 is respectfully requested.

This Amendment is in response to the Final Office Action dated March 23, 2005. By the present amendment, each of the independent claims 11, 14 and 17 has been amended to revise language regarding the location of the bit line which was rejected, in claim 17, under 35 USC §112, first paragraph, and, with regard to claims 11 and 14, under 35 USC §112, second paragraph. In particular, the unnecessary language regarding "which is formed on said second insulating film" (claims 11 and 14) and "which is formed on said element isolation region" (claim 17) has been removed from each of these claims to avoid confusion.

In addition, each of the independent claims 11, 14 and 17 has been amended to clarify the invention, as will be discussed below in conjunction with reference to the sketches provided in the attached Appendix. Incidentally, regarding the following discussion, it is noted that reference to the specific drawing figures of the application shown in the Appendix is solely for the purposes of example, and not intended to limit the claims (only to the specific features of these respective drawing figures).

Reconsideration and removal of the 35 USC §102(e) rejection of claims 11-18 as being anticipated by Kasai (USP 6,448,597) is respectfully requested. By the present amendment, each of the independent claims 11, 14 and 17 has been amended to more clearly define the relative location of one end portion and another end portion of the first opening in the first direction to emphasize the distinctions over Kasai. In particular, each of the independent claims now specifically defines that one end of the first opening in the first direction is formed on the second opening and

over the semiconductor region and is not covered with the bit line, whereas another end portion of the first opening, again in the first direction, is formed on the second insulating film, over the element isolation region and under the bit line. To assist the Examiner in visualizing this arrangement, the attached sketches showing Figs. 19 and 36 of the present invention have been marked to illustrate how the claim language of claims 11, 14 and 17 can be read on these drawing figures. A marked copy of Fig. 8 of the Kasai reference has also been provided to assist in understanding the distinctions of the present claimed invention from the arrangement of Kasai.

More specifically, referring to the attached marked copies of Figs. 36 and 19, it can be seen how different end portions of the first opening are located in different areas, particularly with regard to the bit line. More specifically, as can be seen from both the marked copies of Figs. 19 and 36, one end portion of the first opening, in the first direction, is not covered by the bit line while the other end portion of the first opening, in the first direction, is covered by the bit line. It is respectfully submitted that Kasai fails to teach or suggest anything equivalent to this first opening which has one end portion in the first direction which is not covered by the bit line and another end portion in the first direction which is covered by the bit line.

For example, referring to Fig. 1, 5 and 8 of Kasai, it can be seen that the entire upper surface of the bit contact 57 is covered with the bit line 38. Thus, in attempting to read the bit contact 57 as the claimed "first opening", it is clear that there is no portion of this bit contact, in the first direction, which is not covered with the bit line 38.

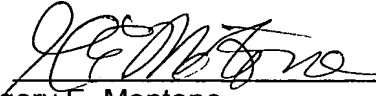
With regard to arguments set forth in the Office Action concerning the relationship of the diameter between the first and second openings shown in Fig. 14B of Kasai, it is respectfully noted that Fig. 14B of Kasai is not a cross-sectional view along the "first direction" as defined in the present independent claims 11, 14 and 17. Instead, the arrangement shown in Fig. 14B would correspond to a cross-sectional view along a second direction perpendicular to the first direction, as the first direction is defined in the present independent claims 11, 14 and 17. It is very important to realize that the relationship of diameter between the first and second openings is not the same in the first direction and the second direction. For example, in Kasai, the diameter of the upper portion of the bit contact 57 in the first direction is equal to that of the lower portion of the bit contact 57 in the first direction. The reason for this is that the silicon nitride film 54 does not exist on both sides of the bit contact 57 when viewed along the first direction. This can be seen, for example, from the difference of section shapes of the contact pads 74 when shown in Figs. 12 and 13, and is reflected in the marked copy of the attached Fig. 8 of Kasi shown in the Appendix.

Accordingly, in light of the failure of Kasai to either teach or suggest the claimed respective arrangement of the end portions of the first opening added into each of the independent claims 11, 14, and 17, as discussed above, reconsideration and allowance of these independent claims, together with their respective dependent claims, is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37

CFR §1.136. Please charge any shortage of fees due in connection with the filing of this paper, including extension of time fees, to the Deposit Account of Antonelli, Terry, Stout & Kraus, No. 01-2135 (Application No. 501.37959CC2), and please credit any excess fees to said deposit account.

Respectfully submitted,
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Appendix

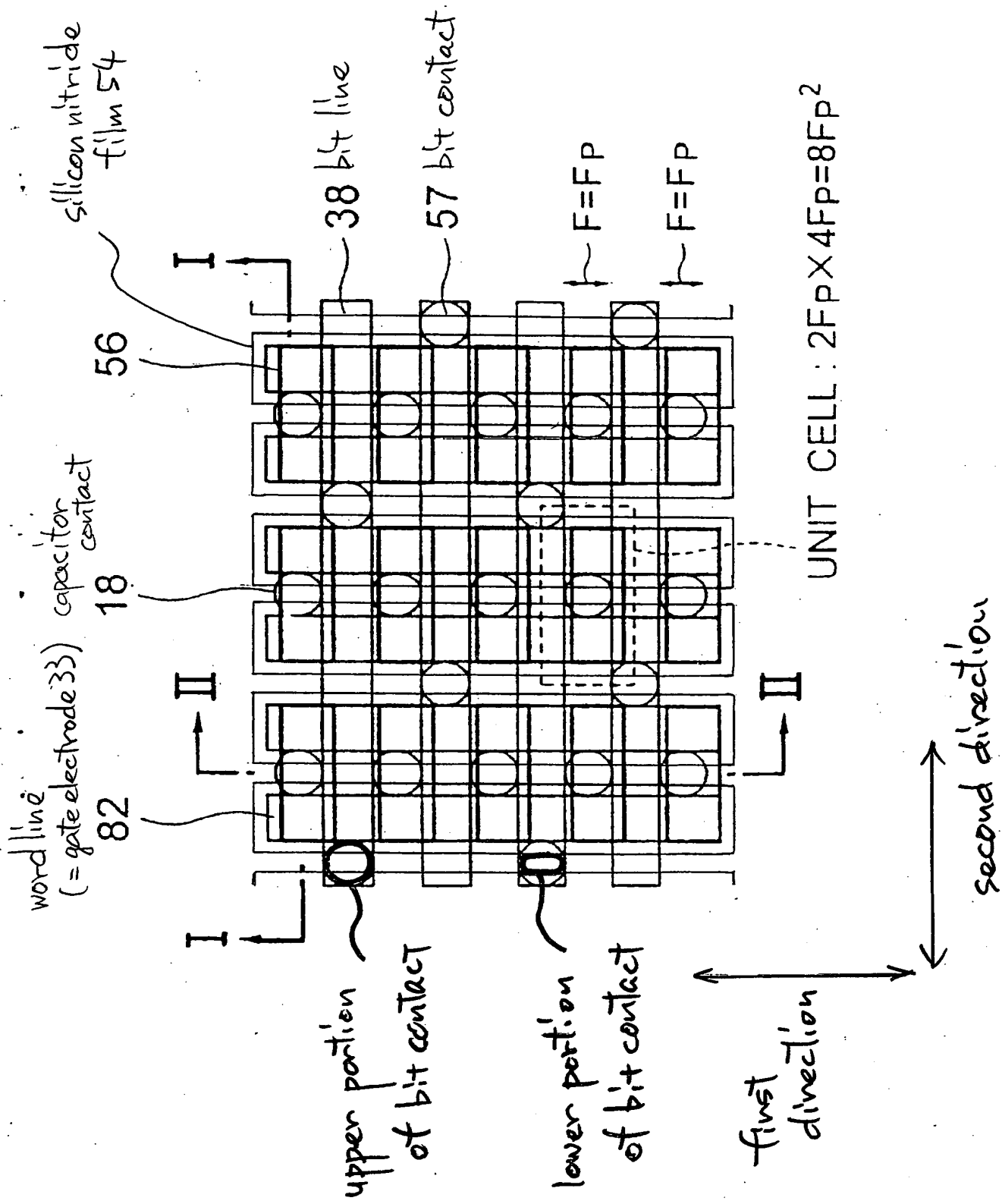


FIG. 8 (Kasai)
Reference

first direction (B-B')

(Present Invention)

FIG. 19

one end portion
of first opening

the other end portion
of first opening

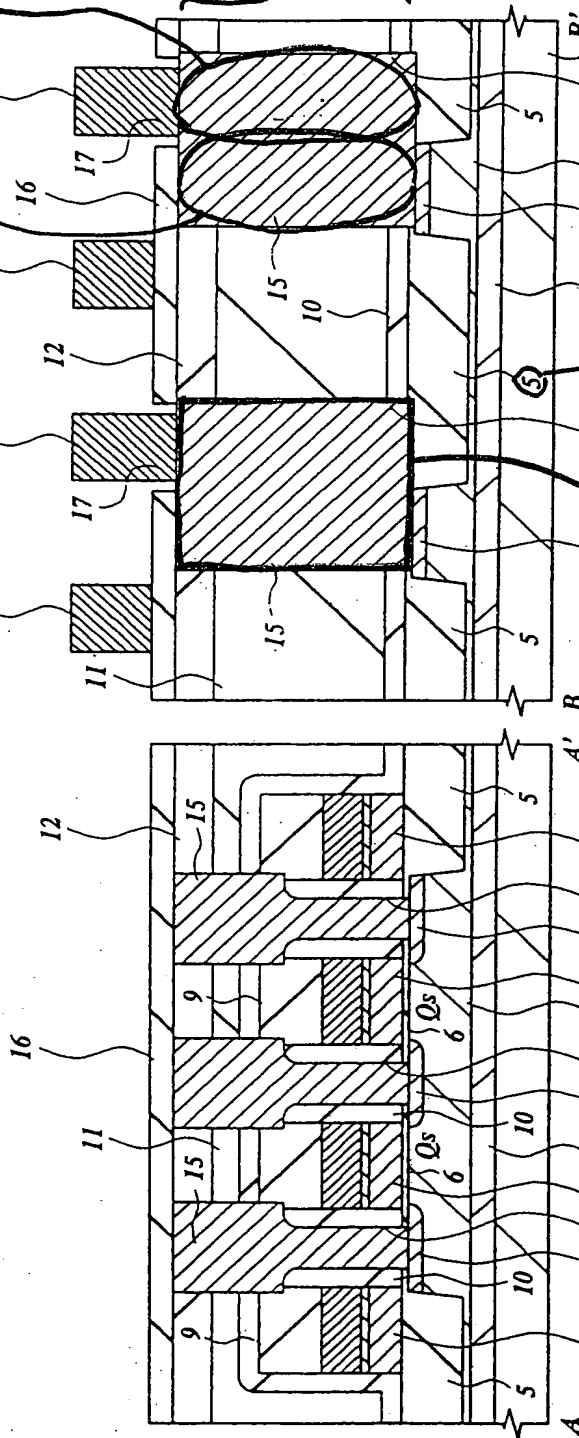
bit line

BL

BL

BL

BL



19/42

first insulating film

semiconductor region

element isolation region

first opening

(Present Invention)

FIG. 36

